Personal finances of residents at three Canadian universities

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Objectives: To address 3 research questions (What financial choices do residents make? Are the financial choices of residents similar to those of the general public? Are the financial choices of surgical residents reasonable?), we examined financial data from Canadian residents. **Methods:** A written survey was administered to 338 residents (103 of them surgical residents) at 3 Canadian training institutions (University of Toronto, Queen's University and University of Manitoba). Resident household cash flows, assets and liabilities were characterized. Finances for residents were compared with those of the general public, by means of the Survey of Household Spending and Survey of Financial Security. **Results:** Median resident income was $45 000 annually (Can$ throughout). With a working spouse, median household income was $87 500. Among residents, 62% had educational debt (median $37 500), 39% maintained unpaid credit-card balances (median $1750), 36% did not budget expenses, 25% maintained cash reserves < $275, and 22% contributed neither to retirement nor nonretirement investments. Residents spent more on vehicles compared with members of the general public (median $17 500 v. $10 720, $p = 0.002$) and on monthly housing (median $875 v. $729, $p < 0.001$), respectively. Residents were more likely to carry student loans than people in the general population (61% v. 21%), more likely to carry vehicle loans (74% v. 29%) and less likely to carry credit-card debts (39% v. 50%, respectively). Surgical residents had income expectations after graduation higher than current billings justified. Fewer surgical (69%) than anesthesiology residents (88%, $p < 0.05$) contributed to Registered Retirement Savings Plans. **Conclusions:** From this limited sample, residents spend more than age- and income-matched members of the general public. Many residents save too little, fail to budget, and carry high educational and credit-card debts. Surgical residents' expectations of future income may be unrealistic. Further study is warranted.

Objectives : Pour aborder les trois questions de la recherche (quels choix budgétaires les résidents font-ils? Les choix budgétaires des résidents sont-ils semblables à ceux du grand public? Les choix budgétaires des résidents en chirurgie sont-ils raisonnables?), nous avons examiné les données budgétaires provenant de résidents canadiens. **Méthodes :** On a mené une enquête écrite auprès de 338 résidents (103 résidents en chirurgie) à trois établissements de formation au Canada (Université de Toronto, Université Queen's et Université du Manitoba). L'enquête a cherché à connaître l'encaisse, l'actif et le passif du ménage des résidents. On a ensuite comparé les finances des résidents à celles du grand public au moyen des données de l'Enquête sur les dépenses des ménages et de l'Enquête sur la sécurité financière. **Résultats :** Le revenu médian annuel des résidents a atteint 45 000 $. Lorsqu'un conjoint actif était présent, le revenu médian du ménage atteignait 87 500 $. Au nombre des résidents, 62 % devaient rembourser une dette d'études (médiane : 37 500 $), 39 % présentaient constamment un solde impayé sur leurs cartes de crédit (médiane : 1750 $), 36 % ne faisaient pas de budget de dépenses, 25 % avaient des réserves en argent < 275 $ et 22 % ne faisaient aucun placement de retraite ou hors retraite. Les résidents achetaient des véhicules plus coûteux que ceux du grand public (médiane : 17 500 $ c. 10 720 $, $p = 0{,}002$) et dépensaient davantage pour leur logement (médiane 875 $ c. 729 $, $p < 0{,}001$). Les résidents étaient plus susceptibles d'avoir un prêt étudiant à rembourser que la population en général (61 % c. 21 %), plus susceptibles d'avoir à rembourser un emprunt sur un véhicule (74 % c. 29 %) mais moins sus-

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ceptibles de maintenir un solde impayé sur des cartes de crédit (39 % c. 50 % respectivement). Les résidents en chirurgie s'attendaient à toucher après leur diplôme des revenus supérieurs à ce que leur facturation actuelle justifiait. Moins de résidents en chirurgie (69 %) qu'en anesthésiologie (88 %, $p < 0,05$) cotisaient à un régime enregistré d'épargne-retraite. **Conclusions :** À partir de cet échantillon limité, on constate que les résidents dépensent plus que les membres du grand public à un âge et à un revenu équivalents. Beaucoup de résidents ont trop peu d'épargne, ne font pas de budget et doivent assumer des dettes élevées à cause de leurs études ou de l'utilisation de cartes de crédit. Le revenu futur auquel s'attendent les résidents en chirurgie est sans doute irréaliste. D'autres études s'imposent.

This study examines how physician residents at 3 Canadian universities manage their personal finances. This work was motivated by concern that residents, despite their education and intelligence, may save little for retirement or other financial objectives. A recent study of Canadian urology residents[1] showed that they carried high educational and credit-card debts, had low cash reserves and exhibited a failure to budget; but to our knowledge, no other studies have examined how Canadian residents manage their personal finances.

This descriptive study was guided by 3 research questions: What financial choices do residents make? Are the financial choices of residents similar to those of the general public? And are the financial choices of surgical residents reasonable?

Methods

A written survey instrument was developed to cover relevant topics, including demographics, expenses and liabilities, assets and savings, income, investments and projected income after residency. The United States Federal Reserve Board's Survey of Consumer Finances[2] served as a template for the formulation of appropriate questions.[3] The survey was modified to reflect Canadian financial circumstances, and pilot-tested.

The final instrument was administered at 3 residency training institutions in Canada. Because the pilot test revealed subjects' concerns about associated potential personal identifiers when divulging personal financial information, subjects were guaranteed anonymity; no follow-up of nonresponders was conducted. A convenience sampling between October 2000 and April 2001 was done in departments willing to participate; again, the number of nonresponders was left unassessed. Of the 338 respondents who completed the survey (59% men, 41% women), 46 attended Queen's University, Kingston, Ontario; 49, the University of Manitoba, Winnipeg, Manitoba; and 243, the University of Toronto, Toronto, Ontario. Of all 338 respondents, 196 (59%) were married: 126 had spouses who worked for pay, and 61 residents supported children. Median ages of residents and spouses were 29 and 30 years, respectively. The median postgraduate year of training was 3rd. Intended areas of specialty included surgery (103), psychiatry (57), anesthesiology (42), family practice (41), pathology (24) and ophthalmology (18); 144 intended to pursue academic medicine, 167 private or group practice, 5 public health and 3 military medicine. Ninety percent of respondents indicated their intent to practice ultimately in Canada.

Income and expenses between residents and the general population of Canadians were compared with data from Statistics Canada's Survey of Household Spending,[4] restricting the latter sample to respondents of similar ages, employed full-time and residing in an urban area, to conform to our analogous resident sample. The samples were matched between the 10th and 90th percentiles for age and household income. Comparisons of assets and debts between residents and the general Canadian population were done by means of the 1998 Survey of Financial Security (SFS),[5] likewise restricting that data as just described. We considered retirement accounts among residents and their spouses to include Registered Retirement Savings Plans (RRSPs) and Registered Pension Plans (RPPs). Investments outside tax-deferred RRSP and RPP accounts, including mutual funds, stocks, bonds and annuities, were considered non-retirement investments.

Descriptive statistics were reported with medians, means or percentiles, depending on the context of the underlying variable. Percentages were computed according to the number of respondents per variable. Statistical analyses included the χ^2 test, 2-tailed *t* test, analysis of variance (ANOVA), pairwise comparisons, equality of means, Mann–Whitney *U* test or

Table 1

Cash flows for responders returning positive, non-zero values*

Variable	Non-zero* responders, %	Percentile distribution, Can$		
		25th	50th	75th
Annual resident income	100	37 500	45 000	45 000
Spouse working: total household income	64	87 500	87 500	112 500
Monthly rent/mortgage	100	625	875	1 375
Monthly child care (responders with children)	72	450	875	1 500
Contributions to retirement accounts, resident	68	1 375	2 250	6 250
Spouse	69	1 375	3 750	6 250

*Some variables obtained many responses of zero; e.g., with 64% of residents' spouses working for pay, 36% of spouses had an income of $0. To avoid skewed data for multiple zero values, only *non-zero values* were listed in these tables.

Kruskal–Wallis test. Regression analysis was used to assess partial correlations. A p value of 0.05 or less was considered significant. Comparisons across specialties were done only for specialties with > 10 respondents. The SFS was reported by Statistics Canada in aggregate data only, so that statistical comparisons between our data set and SFS could not be done.

Results

Table 1 summarizes cash flow data for residents. Median monthly rent was $875, versus $1125 for median mortgage payment ($p = 0.006$). Median monthly payment for educational debt was $375, with a like amount for that of spouses. Median monthly automobile loan payment was $300. Only 29% of residents saved a portion of their pay (median savings: 10% of paycheque).

Table 2 summarizes residents' assets and liabilities. Educational debt included all loans associated with such debt. The median prices of first and second vehicles were $17 500 and $22 500, respectively. Twenty-two percent of respondents contributed to neither retirement nor non-retirement investment accounts.

Differences in some financial variables were attributable to budgeting. Sixty-three percent of residents budgeted their expenses; 36% did not; and 1% did not know if they budgeted. Among residents who budgeted, 22% had unpaid credit-card balances over the past year versus 70% of those who did not budget ($p < 0.0001$). Among residents who budgeted, 75% contributed to a retirement savings account, versus 59% who did not budget ($p = 0.006$).

In evaluating investment patterns for retirement planning, the overall data were consistent with a pattern that residents were motivated to contribute to retirement accounts largely in keeping with their overall interest to save. Median cash reserves were higher for residents who contributed to a retirement account ($1750) versus those who did not ($875, $p = 0.005$); for home-owners ($2250) versus renters ($1250, $p = 0.007$); and for residents who budgeted ($1750) versus those who did not ($1250, $p = 0.02$). Likewise, 52% of residents who contributed to retirement accounts had investment savings in non-retirement accounts as well, versus 26% of those who did not contribute to retirement accounts ($p < 0.0001$). Consistent with the pattern that resident savings habits reflect their overall interest to save and not their specific financial circumstances, retirement-account contributions did not correlate with resident income ($r^2 = 0.13$, $p < 0.0001$). Residents' retirement-account balances did not correlate with total non-retirement account balances ($r^2 = 0.02$, $p = 0.14$). Neither did spousal retirement-account contributions correlate with spousal incomes ($r^2 = 0.02$, $p = 0.08$). Median retirement-account contributions were higher for residents with no credit-card debt ($3750) versus those with such debt ($1750; $p = 0.002$). Educational debt did not correlate with unpaid credit-card balances ($r^2 < 0.01$, $p = 0.63$), monthly housing expenses ($r^2 = 0.02$, $p = 0.06$), home market value ($r^2 = 0.04$, $p = 0.16$), retirement account contributions ($r^2 = 0.02$, $p = 0.10$), or cash reserves ($r^2 = 0.02$, $p = 0.06$). As well, residents with non-educational debts (credit-card balances and auto loans) were 14% less likely to contribute to retirement accounts than those without such debts ($p = 0.004$).

For most specialties, resident income expectations exceeded the actual incomes of current Canadian specialists (Table 3). Calculated incomes reflect actual Ontario billings with deductions for overhead by specialty, as reported by Statistics Canada.[6,7] Expected income across specialties was highest for general surgery and anesthesiology, and lowest for pathology. Pathology residents had the highest rate of educational loans (92%) compared with all other specialties, with surgeons and family practice residents exhibiting the lowest (58%; $p = 0.05$). Rate of contribution to RRSPs was highest for anesthesiology residents. Across specialties, differences in rate of budgeting, unpaid credit-card balances and current incomes were not statistically significant.

Residents' reasons for not saving in tax-deferred retirement accounts related primarily to cash flow, with agreement that they had no money left after expenses ($n = 65$), that they will contribute after they graduate and earn more ($n = 41$), and that they are currently paying off student loans ($n = 28$). Conversely, the most commonly cited reason why residents save is for retirement ($n = 174$), followed by their desire to

Table 2

Assets and liabilities of residents surveyed

Variable	Non-zero responses, %	Percentile distribution for values > 0, Can$		
		25th	50th	75th
Resident educational debt	62	17 500	37 500	62 500
Spouse	38	5 500	17 500	37 500
Market value of home	29	125 000	225 000	325 000
Mortgage balance	28	87 500	125 000	175 000
Retirement account balance	68	4 000	8 750	27 500
Spouse	69	4 000	12 500	27 500
Mutual funds/stocks/bonds/ annuities (non-retirement)	45	4 000	12 500	27 500
Cash reserves	100	275	1 750	3 500
Credit card balances*	39	750	1 750	3 750
Miscellaneous debt	15	3 750	12 500	25 000

*Among residents carrying credit card interest charges, median annual interest rate was 18%.

travel or take vacations (n = 137).

Comparing married and unmarried residents, mean ages were 31 (standard deviation [SD] 4 yr) versus 29 years (SD 3 yr, $p < 0.0001$); PGY levels were 3.3 (SD 1.5) versus 2.8 (SD 1.4, $p < 0.01$); resident incomes (excluding spousal income) were $46 538 (SD $13 968) versus $43 689 (SD $9245, $p = 0.01$); nonretirement investment accounts totalled $24 127 (SD $6316) versus $6582 (SD $14 795, $p = 0.001$); and cash reserves were $5633 (SD $10 660) versus $2843 (SD $5308), respectively ($p = 0.004$). Differences in RRSP balances ($16 960 [SD $27 015] v. $11 267 [SD $21 884], respectively; $p = 0.06$) approached statistical significance. Other parameters showed no significant statistical difference for marital status.

Income and expenses are compared between residents and the general population in Table 4. Although income data were similar at the median, the populations differed at the tails of the distribution. Residents had higher incomes but saved no more than the general population: their assets and debts are shown in Table 5. Residents were less likely to own their house or carry credit-card debt, but more likely to carry educational and vehicle loans. Residents had median retirement account balances of $2000 versus $8000 for the general population; median household net worth for unattached individuals, $10 499 versus $9100; and median household net worth for families, $47 623 versus $47 500, respectively.

Discussion

Some financial choices may indicate problems among residents in making financial decisions, including credit-card debt, failure to budget, low cash reserves, and failure to contribute to retirement accounts. Over a third of residents had credit-card debt accruing interest penalties. Although this debt was modest among many of the residents studied, 10% maintained unpaid balances above $8750. Residents who budgeted their expenses were less likely to have credit-card debt compared with those who did not budget. In fact, residents who budgeted their expenses had higher retirement-account contributions and cash reserves than residents who did not budget. The reason cited most frequently for not saving was residents' perception that they "have no money left after expenses," which may represent lack of budgeting.

On balance, the residents we sampled behave in similar ways to the general population, but show greater propensity to spend on cars and housing, with correspondingly greater indebtedness. One interpretation is that residents are less thrifty than the general population. But the decision of an individual to save less than the average out of current income should not necessarily be interpreted as irrational or irresponsible. A common motivation to save and borrow is to achieve a relatively stable level of consumption throughout one's adult life. Residents anticipate substantial earnings growth and may prefer to maintain high current consumption levels through borrowing, postponing saving to repay debts and finance retirement consumption to a period later in life. Indeed, such a "life cycle" pattern of saving is often observed among individuals with rising incomes.[8]

Residents are at a stage at which they emerge from a period of low income and high (tuition-related) expenses. They anticipate sharp income increases in the near future. Based on their current and their anticipated future incomes (Table 1, Table 3), we calculate that they anticipate future increases of 275%–610% from their current incomes. Relative to the general population, they have had little opportunity to accumulate for retirement and they anticipate soon having far greater opportunity. Thus, high

Table 3

Differences across specialties

Specialty	Median income 5 years after residency training, Can$: Expected by residents	Median income 5 years after residency training, Can$: Calculated*	Residents who contribute to RRSPs, %
Surgery	275 000	170 772	69
Psychiatry	175 000	98 890	77
Anesthesiology	275 000	177 723	88
Family Practice	175 000	97 586†	55
Pathology	125 000	—‡	50
Ophthalmology	225 000	231 432	71
p value	< 0.0001	—	0.005

RRSPs = Registered Retirement Savings Plans

*Obtained from OHIP data for 2000–01 physician median incomes, including threshold adjustments and clawbacks,[8,10] minus overhead and gross expenses as supplied by Statistics Canada for the 1997 tax year for self-employed physicians,[9] specific to each specialty.

†Family Practice calculations were based on OHIP General Practice data,

‡whereas Pathology was not separately listed in OHIP data.

Table 4

Median income and expenses of responding residents and nonresidents, in Canadian dollars*

Income or expense	Residents	Non-residents†	*p* value
Primary income	45 000	45 000	0.002
Household income‡	87 500	80 000	0.08
Monthly housing cost	875	729	< 0.001
Purchase price of car	17 500	11 800	0.002
Household RRSP contributions	1 375	1 500	0.67
Among positive contributors	3 750	3 600	0.16
% contributing	59.8%	65.6%	0.52

*Unless otherwise indicated.

†Nonresident respondents to the survey of household spending included here were all 25–34 years old, employed full-time and living in urban areas.

‡Married respondents with a wage-earning spouse only.

levels of debt and low levels of saving may be a sensible strategy that leaves residents no worse off in the long run than they might otherwise be.

The current propensity of residents to contribute to retirement plans (i.e., RRSPs) and the amounts actually contributed are similar to those of the general population. It may seem that residents are reasonably financially sophisticated and forward-looking. In fact, current RRSP contributions may be a bad financial strategy for many residents. Under Canadian tax law, unused RRSP contribution "room" may be carried forward, increasing allowable contributions in future years. Since current contributions to an RRSP are deducted from current taxable income, a resident who anticipates earning higher income and facing higher tax rates in future may increase after-tax retirement wealth by saving in taxable assets outside RRSPs, which can then be transferred into an RRSP account later, when their annual income is higher.[1,9] However, we found residents making or not making RRSP contributions did not differ in their non-RRSP savings. We infer that residents likely are not engaging in this tax strategy.

The comparisons across specialties are provocative, although one must caution, given the convenience sampling, against extrapolating. Nonetheless, on average almost all residents, regardless of specialty, anticipate incomes higher than appear to be realistic. If residents are engaging in a practice of "spend now and earn later," they may face cash flow problems if their future incomes are less than anticipated. Further, the finding that surgeons have high income expectations, equivalent to those of anesthesiologists (yet contribute less often to RRSPs), may imply differences in savings habits. In our prior study,[1] we found financial patterns among urology residents similar to those we have now found among surgical residents. Further study across specialties is warranted.

Table 5

Percentages of responding residents and nonresidents with assets or debts

Assets and debts	Res.	Non*
% having these assets:		
Retirement accounts	63	59
Other financial assets†	38	39
Own home	29	43
% having these debts:		
Mortgage on principal residence	23	38
Credit card debt	39	50
Student loan(s)	61	23
Vehicle loan(s)	74	29

Non = nonresidents; Res. = residents
*Nonresident respondents included were 25–34 years old, employed full-time and living in urban areas; i.e., similar to our resident sample
†Excluding bank accounts

Patterns of savings and expenses among married and unmarried residents were difficult to interpret. As married residents had higher investment balances and cash reserves, one interpretation is that they are financially prudent compared to unmarried residents. However, married residents were slightly older, were further along in their level of training and had higher resident incomes. An alternative explanation is that married residents had more cash at their disposal; certainly, if the spouse was working for pay, we would anticipate higher cash reserves and investment contributions.

This study has several potential limitations. First, we used a convenience sampling. We sampled residents at 3 Ontario institutions, with the bulk of respondents coming from Toronto. Only certain specialties participated. We did not conduct follow-up sampling of nonresponders. There is a potential for bias. We caution against extrapolating this data to residents at other Canadian institutions or in specialties not represented. Further studies among residents at other Canadian institutions across multiple specialties should be conducted.

In addition, this study did not address financial learning needs and the benefits of formal financial education for residents. Among residents with poor financial management skills, we assume that the impact of financial educational intervention will be dependent on whether a resident lacks financial savvy or whether she or he has deliberately chosen to "spend now and earn later." Residents with patterns of low savings, inattention to budgeting, high credit-card debts and automobile loans would seem likely to benefit from financial education. To our knowledge, no residency program has formally incorporated financial management as part of a residency training curriculum, as the issue falls outside the mandate of the Royal College of Physicians and Surgeons of Canada. The desire to seek financial counselling will remain driven by residents' perceived needs.

Conclusions

Among residents sampled in this study, 39% carry credit-card balances, 37% do not budget, and 22% do not contribute to investments, retirement or otherwise. On balance, residents' financial decisions appear similar to those of the general population. Surgical residents exhibit financial patterns that in some cases may be problematic. Further study is warranted.

Competing interests: None declared.

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